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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,294	08/18/2003	Youseok Kou	KOUY3001/EM	2000

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EXAMINER

SPISICH, GEORGE D

ART UNIT	PAPER NUMBER
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3616

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/642,294

Applicant(s)

KOU, YOUSEOK

Examiner

George D. Spisich

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

The drawings are objected to because in Figure 1, the word damper is misspelled "damfer" in boxes "16" and "17". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Furthermore, Examiner would like to clarify that the flowchart shown in Figure 2, showing the steps of operation of the roll and yaw control appears to only provide yaw

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control if there is a roll threshold rate met or exceeded. From the flowchart, if the roll threshold rate is not met or exceeded, the control system cycles back to the top.

Examiner points out that this arrangement would not appear to perform a yaw control for a situation that is encountered with only a dangerous yaw rate condition.

Specification

The disclosure is objected to because of the following informalities:

On page 7, line 7 and page 8, line 11, "part 18" should be changed to - - part 17 -
- to remain consistent with the occurrence earlier in the specification and the reference numeral in the Figure.

Appropriate correction is required.

Claim Objections

Claim 1 is objected to because of the following informalities:

In claim 1, lines 3-4 and 8-9, the phrase "or not" is unnecessary and should be deleted. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2 and 3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2 and 3 recite the limitation "both right and left front wheel dampers" and also "both right and left rear wheel dampers" in lines 2-4. There is insufficient antecedent basis for this limitation in the claim. These dampers have not been previously claimed in claim 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by JP09-109641.

JP '641 discloses a vehicle suspension having dampers and the control of the suspension relates to both roll control and yaw control. The roll angle detecting means detects an actual roll rate and as it actuates the suspension anti-roll system it would be

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due to a threshold roll rate (whether it be any threshold roll rate). Therefore, there is a step of deciding if the anti-roll is required and if so, the anti-roll control is executed. The control system also operates in a yaw rate control in a manner that as it decides that a threshold yaw rate (which may be any yaw rate) is encountered. The actual, desired and threshold yaw rate may be at or near the same value. Therefore, there is a step of deciding if anti-yaw control is required by determining a difference between actual and a desired yaw rate and compared to a threshold yaw rate and if any undesirable threshold yaw rate is determined, the anti-yaw control is executed.

With respect to the anti-roll control (claim 2) and the anti-yaw control (claim 3) being performed by "hard" and/or "soft" control the front and/or rear dampers, as these are relative terms that the specification only relates further relative terms (maximum and minimum), it is inherent that the damper control of JP '641 would perform or be controlled as claims 2 and 3 describe if the control system so requires.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bodie et al. (USPN 6,505,108) in view of Izumi et al. (USPN 6,053,583).

Bodie et al. disclose an anti-roll and an anti-yaw control suspension. The method of providing anti-roll and anti-yaw include damper based roll and yaw control. With respect to claims 2 and 3, the method of Bodie et al. inherently would be able to control the front and rear dampers in a simultaneous hard/hard manner for anti roll control and in a hard/soft manner for anti-yaw control if necessary. Since the damper control may be individual, it is understood that the control as claimed is possible by the control system of Bodie et al.

Although Bodie et al. determines an actual roll rate and a yaw control term 48 which is the difference between the desired yaw rate and the actual yaw rate (col. 5, line 42-48) Bodie et al. does not state that these rates are compared with a threshold roll rate and a threshold yaw rate, since it is not specifically addressed, Examiner is relying on Izumi et al. However, Examiner also states that any roll or yaw rate that initiates the roll or yaw control to be executed would be due to a threshold roll/yaw rate being exceeded.

Izumi et al. disclose a stability control system for detecting at least the lateral acceleration, the yaw rate and the steering angle of the vehicle. These values are used to determine excessive roll and yaw rates when compared to threshold rates. Therefore, Izumi et al. teaches the comparing of actual and threshold roll/yaw rates which if the actual exceeds a threshold value, the stability system is executed.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the sensor and control system of Bodie et al. to specifically include the comparison to a threshold rate as taught by Izumi et al. in the control system so as to effectively restrain extreme vehicle dynamic conditions.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Heyring et al. (USPN 6,519,517), Lu et al. (USPN 6,654,674), Lu et al. (USPN 6,631,317), Lu et al. (USPN 6,556,908), Lu (USPN 6,684,140), Badenoch et al. (USPN 6,181,997), Fujita (USPN 5,732,371), Fujita (USPN 5,882,709), Koh (USPN 6,751,537), Shino et al. (USPN 6,711,482), Horvat et al. (USPN 5,576,959), Kindermann et al. (USPN 5,066,041), Tanaka et al. (USPN 4,624,476), Murata (USPN 6,285,935), Kishimoto et al. (USPN 5,513,108), Sasaki et al. (USPN 5,638,275), Wolfe (USPN 5,390,121), Dieter (USPN (USPN 5,046,008), Izumi et al. (USPN 6,053,583), JP11-115440, JP08-183318.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George D. Spisich whose telephone number is (571) 272-6676. The examiner can normally be reached on Monday-Friday 9:00 to 6:30 except alt. Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on (571) 272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

George D. Spisich
August 14, 2005



PAUL N. DICKSON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600